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10/681,191	10/09/2003	Takashi Matsumoto	50195-394	7860

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EXAMINER	
DUONG, FRANK	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/681,191	MATSUMOTO ET AL.	
	Examiner	Art Unit	
	Frank Duong	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to communications dated 10/09/03. Claims 1-10 are pending in the application.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file. It is also noted that there is no certified English translation for the priority paper submitted. Therefore, Applicants cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Information Disclosure Statement

3. The information disclosure statements filed 10/09/03 and 12/05/05 comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. They have been considered and placed in the application file.

Claim Objections

4. Claims 1, 4 and 7-8 are objected to because of the following informalities:

As per claim 1:

Line 2, the term "capable of" should be changed to --is--.

Lines 8 and 13-14, the term "can be" should be changed to --is--.

As per claim 4, lines 3 and 6-7, the term “can be” should be changed to --is--.

As per claim 7, lines 10 and 12, the term “can be” should be changed to --is--.

As per claim 8, lines 7 and 12, the term “can be” should be changed to --is--.

A common reason for doing so is that such term does not positively recite a limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, the claim is deemed to be indefinite for the following rationales:

Lines 6-8, the clause “the second communication system receives, from the second communication system through the data transmitting and receiving part, information indicative of a first data amount” is vague. It is unclear how “the information indicative of a first data amount” is being received from “the second communication system” through “the data transmitting and receiving part” of “the transmitting device”. Perhaps, the clause should be changed to “the second communication device receives, from the transmitting device through a data transmitting and receiving part of the second communication device, information indicative of a first data amount” to reflect the "information indicative of the first data amount" being transmitted to the second communication system by the "transmitting device" through its "transmitting and receiving part."

Lines 15-16, the clause "the one data amount being no greater than the other data amount" lacks of antecedent basis. In addition, it is unclear whether "the first data amount" or "the second data amount" is referred to. Moreover, the clause fails to set forth the metes and bounds of the scope of the claimed invention the Applicants seek to protect.

As per claim 2, line 4, the term "the data transmitting and receiving part" lacks of antecedent basis. Furthermore, it is unclear whether the term refers to "the data transmitting and receiving part" at the "data transmitting device" or at the "second communication system."

As per claim 3, line 7, the clause "an interval no narrower than the transmission interval" is vague and indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). In the present instance, the claim recites the broad recitation "transmission interval", and the claim also recites "an interval no narrower than" which is the narrower statement of the range/limitation. See *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

As per claim 4, line 8, the clause "the one data amount being no greater than the other data amount" lacks of antecedent basis. In addition, it is unclear whether "the first data amount" or "the second data amount" is referred to. Moreover, the clause fails to set forth the metes and bounds of the scope of the claimed invention the Applicants seek to protect.

As per claim 5, it variously depends from the indefinite base claim 4.

As per claim 6, lines 7-8, the clause "an interval no narrower than the transmission interval" is vague and indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). In the present instance, the claim recites the broad recitation "transmission interval", and the claim also recites "an interval no narrower than" which is the narrower statement of the range/limitation. See *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

As per claim 7, last two lines, the clause "the one data amount being no greater than the other data amount" lacks of antecedent basis. In addition, it is unclear whether "the first data amount" or "the second data amount" is referred to. Moreover, the clause fails to set forth the metes and bounds of the scope of the claimed invention the Applicants seek to protect.

As per claim 8, last two lines, the clause "the one data amount being no greater than the other data amount" lacks of antecedent basis. In addition, it is unclear whether "the first data amount" or "the second data amount" is referred to. Moreover, the clause fails to set forth the metes and bounds of the scope of the claimed invention the Applicants seek to protect.

As per claim 9, last two lines, the clause “a frame interval no narrower than the transmission interval” is vague and indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). In the present instance, the claim recites the broad recitation “transmission interval”, and the claim also recites “a frame interval no narrower than” which is the narrower statement of the range/limitation. See *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

As per claim 10, the claim calls for “data communication system provided with at least two data transmitting devices as set forth in claim 1”. It is deemed to be indefinite because it is unclear how the devices or elements in the devices are interconnected functionally and structurally. Applicants are required to rewrite the claim to show how the devices or elements in the devices interconnected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 3-4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaiser et al (USP 5,448,561) (hereinafter "Kaiser") in view of ISO/DIS 15765-2 (Road Vehicle-Diagnostics on Controller Area Network (CAN)-Part 2: Network Layer Services, pages 1-31, 2000) (hereinafter "Doc") and further in view of Cach et al (IP over CAN, Internet Draft, pages 1-11, March 2001) (hereinafter "Cach").

Regarding **claims 1 and 10**, in accordance with Kaiser reference entirety, Kaiser shows a transmitting device (Fig. 3A) having a first data transmitting and receiving part (Fig. 3A; 26) for communicating with a second communication system (Fig. 3; 34) having a second data transmitting and receiving part (Fig. 3A; 28) in data frame. Kaiser discloses the device operates in all layers (physical, link and transport layers), but network layer. In other word, Kaiser fails to disclose network layer services for doing a flow control. However, such limitation lacks thereof from Kaiser is well known and disclosed by Doc. In an analogous art, Doc discloses network layer services in a system having sender and receiver (see Doc, page 4, Figure 2) for doing a flow control to provide methods for segmenting, transmission with flow control, and re-assembly messages that might not fit in a single controller area network (CAN) frame (Doc, pages 3, section 5.2). Thus, it would have been obvious to those skilled in the art at the time of the invention was made to implement Doc's network layer services into Kaiser's system to arrive the claimed invention with a motivation to provide methods for segmenting, transmission with flow control, and re-assembly messages that might not fit in a single controller area network (CAN) frame (Doc, pages 3, section 5.2).

Kaiser in view of Doc may not explicitly discloses the second communication device receives information indicative of a first data amount successively received by the second communication device; and the data transmitting device successively transmits data frame whose amount corresponds to one data amount of the first data amount and a second data amount which is successively transmitting by a data transmitting and receiving part of the communication system. However, such limitation lacks thereof from Kaiser in view of Doc is well known and taught by Cach.

In an analogous art, Cach teaches a unicast transmission comprising among other things, the limitation of sender sends a first frame (FF) and data length (data length =40) to a receiver (Cach, page 8, Figure 7) and the receiver sends the sender the flow control (FC) frame and block size (BS=3) and upon receiving the BS from the receiver, the sender sends the receiver three consecutive frame (CF.SN 1-3) to provide a way for transmitting datagrams of Internet Protocol in a CAN system (*Cach, page 2, section 2*). The data length from the sender to the receiver is corresponded to "information indicative of a first data amount is successively received by the receiver" and the block size is corresponded to the "second data amount which is transmitting device successively transmitted."

Thus, it would have been obvious to those skilled in the art at the time of the invention was made to incorporate Cach's teaching into Kaiser in view of Doc's system to arrive the claimed invention with a motivation to provide a way for transmitting datagrams of Internet Protocol in a CAN system (*Cach, page 2, section 2*).

Regarding **claim 3**, in addition to features recited in base claim 1 (see rationales discussed above), Kaiser in view of Doc and further in view of Cach also teaches the data frames are successively transmitted at an interval no narrower than the transmission interval (see Cach, Figure 7 depicts the sender sends three consecutive frames as specified by the BS from the receiver).

As per **claims 4 and 6**, the claims calls for a method having limitations mirrored the apparatus claims 1 and 3. Thus, they are rejected by the same rationales discussed above.

Regarding **claim 7**, in accordance with Kaiser reference entirety, Kaiser shows a transmitting device (Fig. 3A) having a data transmission and receiving mechanism (Fig. 3A; 36 and 36, respectively) for communicating with a second communication system (Fig. 3; 34) having a second data transmitting and receiving part (Fig. 3A; 28) in data frame. Kaiser discloses the device operates in all layers (physical, link and transport layers), but network layer. In other word, Kaiser fails to disclose network layer services for doing a flow control. However, such limitation lacks thereof from Kaiser is well known and disclosed by Doc. In an analogous art, Doc discloses network layer services in a system having sender and receiver (see Doc, page 4, Figure 2) for doing a flow control to provide methods for segmenting, transmission with flow control, and re-assembly messages that might not fit in a single controller area network (CAN) frame (Doc, pages 3, section 5.2). Thus, it would have been obvious to those skilled in the art at the time of the invention was made to implement Doc's network layer services into Kaiser's system to arrive the claimed invention with a motivation to provide methods for segmenting, transmission with flow control, and re-assembly messages that might not fit in a single controller area network (CAN) frame (Doc, pages 3, section 5.2).

Kaiser in view of Doc may not explicitly discloses the second communication device receives information indicative of a first data amount successively received by the second communication device; and the data transmitting device successively transmits data frame whose amount corresponds to one data amount of the first data amount and a second data amount which is successively transmitting by a data transmitting and receiving part of the communication system. However, such limitation lacks thereof from Kaiser in view of Doc is well known and taught by Cach.

In an analogous art, Cach teaches a unicast transmission comprising among other things, the limitation of sender sends a first frame (FF) and data length (data length =40) to a receiver (Cach, page 8, Figure 7) and the receiver sends the sender the flow control (FC) frame and block size (BS=3) and upon receiving the BS from the receiver, the sender sends the receiver three consecutive frame (CF.SN 1-3) to provide a way for transmitting datagrams of Internet Protocol in a CAN system (*Cach, page 2, section 2*). The data length from the sender to the receiver is corresponded to "information indicative of a first data amount is successively received by the receiver" and the block size is corresponded to the "second data amount which is transmitting device successively transmitted."

Thus, it would have been obvious to those skilled in the art at the time of the invention was made to incorporate Cach's teaching into Kaiser in view of Doc's system to arrive the claimed invention with a motivation to provide a way for transmitting datagrams of Internet Protocol in a CAN system (*Cach, page 2, section 2*).

As per **claims 8 and 9**, the claims calls for a method having limitations mirrored the apparatus claims 1 and 3. Thus, they are rejected by the same rationales discussed above.

Allowable Subject Matter

7. Claims 2 and 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior/related art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rode et al (Patent Application Publication 2005/0165940).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FRANK DUONG
PRIMARY EXAMINER

May 22, 2007